

# Superfund in Idaho

## **Grades**

High School

## **Subject**

Science

## **Type of Lesson Plan**

Activity

## **Suggested Duration**

One class period ~ 45 minutes

## **Materials**

- Access to the computer lab
- Access to the Internet
- Computer and LCD projector
- Class copy of EPA Web site <http://www.epa.gov/superfund/about.htm> if access to computers and the Internet is limited.
- Copies of guided worksheet

## **Objective**

TLW...

- Understand what Superfund is and how it relates to hazardous waste sites in Idaho.

## **Set**

Take a hand poll to see how many students have heard the term Superfund. Ask those who raise their hand if they can briefly explain what it is. Expect to see many misconceptions about Superfund. Inform students that they will be educating themselves about Superfund today in class, using the Internet.

## **Instructional Input**

This will be a self-guided lesson on Superfund using the computer and the Internet. Students may need to double up on computers depending on your school's capacity.

Pass the guided worksheet out to students, make sure everyone is logged on and at the correct site, and turn them loose on the assignment.

## **Evaluation**

Use the guided worksheet as the evaluation tool for this lesson. You may also wish to further evaluate student understanding with a quiz over the main points.

## **Closure**

You may wish to have the students correct the worksheets as a class. Have the students write an essay explaining in their own words what Superfund is and how it protects human health.

**Superfund in Idaho, A Guided Worksheet**

When was the Superfund Program created?

Who established the Superfund Program?

Who administers the Superfund Program?

Why was the Superfund Program created?

Superfund \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_  
hazardous waste sites in the United States.

Where does the money in the Superfund Trust Fund come from?

Who can discover and report hazardous waste sites?

What is the difference between Early Actions and Long-term Actions?

List three types of Early Actions.

How long can Early Actions last?

What is Superfund's number one priority during a chemical emergency?

List three types of chemical emergencies.

How does the EPA decide what actions are necessary at non-emergency hazardous waste sites?

List three types of tests EPA performs during site investigations.

What is a CIP? Why is a CIP important for local residents?

The Technical Assistance Grant (TAG) Program is an important part of Superfund. How can TAG assist communities with Superfund sites?

List at least six types of people involved in Superfund cleanups.

What does NPL stand for? How can the NPL be useful?

How long can Long-term Actions last?

List the four phases of a Long-term Action and give a brief description of each.

What can the EPA do if a responsible party refuses to pay for a Superfund cleanup?

How many people have been protected by Superfund cleanup actions nationwide?

What is the ULTIMATE goal of Superfund?

Access <http://www.epa.gov/superfund/> for the following questions. Make sure to click on links for information and then go back to this page.

How many Superfund sites are there nationwide?

How many Superfund and NPL sites are there in Idaho?

List eight ways people may be exposed to hazardous substances.

Provide the name, location, and a description of the Superfund site nearest to your community.

Describe the difference between hazardous and non hazardous waste? Click on the “What Makes a Waste Hazardous?” link.

**Superfund in Idaho, A Guided Worksheet**

When was the Superfund Program created? **1980**

Who established the Superfund Program?  
**Congress**

Who administers the Superfund Program?  
**EPA**

Why was the Superfund Program created?  
**Superfund was created in response to growing concern over health and environmental risks posed by hazardous waste sites.**

Superfund locates, investigates, and cleans up hazardous waste sites in the United States.

Where does the money in the Superfund Trust Fund come from?  
**The Trust Fund is supported by taxes on the chemical and petroleum industries.**

Who can discover and report hazardous waste sites?  
**Ordinary citizens as well as local and state agencies, businesses, EPA, the Coast Guard, and the military.**

What is the difference between Early Actions and Long-term Actions?  
**Early actions deal with immediate risks to human health or the environment. Long term actions are for sites that require extensive clean up.**

List three types of Early Actions.

- **Prevent human contact with contaminants from the site**
- **Remove hazardous materials from the site**
- **Prevent contaminants from spreading**
- **Provide safe drinking water to local residents**
- **Evacuate residents**

How long can Early Actions last?  
**They may last a few days up to five years.**

What is Superfund's number one priority during a chemical emergency?  
**The number one priority of Superfund is to protect human health and their environment.**

List three types of chemical emergencies.

- **Train derailments**
- **Truck accidents**
- **Chemical plant accidents**

How does the EPA decide what actions are necessary at non-emergency hazardous waste sites?  
**EPA reviews site data, inspects the site, and conducts interviews to determine what actions to take.**

List three types of tests EPA performs during site investigations.  
**Soil, water, and air tests.**

What is a CIP? Why is a CIP important for local residents?  
**Community Involvement Plan. CIPs allow residents to participate in the decision making process at Superfund sites. Since local residents are impacted the most, their input is important.**

The Technical Assistance Grant (TAG) Program is an important part of Superfund. How can TAG assist communities with Superfund sites?  
**TAG can provide up to \$50,000 per site to allow communities to hire experts to help interpret data and educate the community about site hazards and cleanup options.**

List at least six types of people involved in Superfund cleanups.

- **Scientists**
- **Engineers**
- **Public health officials**
- **Managers**
- **Lawyers, Judges**
- **Community members**

What does NPL stand for? How can the NPL be useful?  
**National Priorities List. This list provides the locations and information about sites that require Long-Term Actions.**

How long can Long-term Actions last?  
**Several years to decades are required to clean up Long-term Action sites.**

List the four phases of a Long-term Action and give a brief description of each.

- **Study – identify cause and extent of contamination, threats to the environment and human health, and cleanup options.**
- **Proposed Plan – The plan for clean up of the site. Citizens and state and local officials have 30 days to comment on the plan.**
- **Record of Decision – A description of the site cleanup plans.**
- **Remedial Design – Actual cleanup operations are conducted in this phase.**

What can the EPA do if a responsible party refuses to pay for a Superfund cleanup?

**EPA can pay for the cleanup costs out of the Superfund Trust Fund, then sue the responsible party to recover the costs.**

How many people have been protected by Superfund cleanup actions nationwide?

**Millions**

What is the ULTIMATE goal of Superfund?

**The goal is to protect your health and your environment.**

Access <http://www.epa.gov/superfund/> for the following questions. Make sure to click on links for information and then go back to this page.

How many Superfund sites are there nationwide?

**Depends on when you access the site. This is a dynamic process with new sites listed as old ones are deleted.**

How many Superfund and NPL sites are there in Idaho?

**Depends on when you access the site. This is a dynamic process with new sites listed as old ones are deleted.**

List eight ways people may be exposed to hazardous substances.

- **Contaminated air**
- **Direct contact with waste**
- **Contaminated drinking water**
- **Fire or explosion**
- **The food chain**
- **Contaminated ground water**
- **Contaminated soil**
- **Contaminated surface water**

Provide the name, location, and a description of the Superfund site nearest to your community.

**See the website. Click the “locate Superfund sites” under “Tools” in the right column on <http://www.epa.gov/superfund/>.**

Describe the difference between hazardous and non hazardous waste? Click on the “What Makes a Waste Hazardous?” link.

**See the “What is the difference between hazardous and other waste?” paragraphs. Summarize as you see fit.**